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**SINGLE CHIP MODULES, REPAIRABLE MULTICHP MODULES,  
AND METHODS OF FABRICATION THEREOF**

**Abstract of the Disclosure**

Multichip and single chip modules are presented  
5 as well as a chips first fabrication of such modules.  
The multichip module comprises a plurality of chips  
affixed in a planar array by a structural material  
which surrounds the sides of the chips such that the  
upper surfaces of the chips and an upper surface of  
10 the structural material are co-planar and the lower  
surface of at least one chip and a lower surface of  
the structural material are co-planar. A photo-  
patternable dielectric is disposed directly on the  
upper surfaces of the chips. The photo-patternable  
15 dielectric includes vias to at least some contact  
pads at the upper surfaces of the chips and the  
module further comprises an intrachip metallization  
layer on the photo-patternable dielectric layer.  
Subsequent processing provides a multi-layer chip  
20 interconnect structure over the intrachip  
metallization layer and photo-patternable dielectric.  
Testing and repair of the module can be accomplished  
prior to or subsequent to fabrication of the multi-  
layer chip interconnect. Formation of multiple  
25 single chip modules is accomplished by singulating  
the multichip module into individual packages.